

Claims:

5 1. A method of locating a position on a linear data storage medium from which to write data, said method comprising the steps of:

transporting said linear data storage medium past a read head;

reading a linear position data describing a linear position along said linear data storage medium and from said linear position data determining an approximate position of an append position from which to start writing data;

10 having found said approximate position of said append point, reading an absolute C1 code word quad identifier number to identify individual C1 code word quads along the length of said data storage medium;

15 comparing said read absolute C1 code word quad number with a target absolute C1 code word quad number;

finding a correspondence between said read absolute C1 code word quad number and said target absolute C1 code word quad number;

20 if a match between said read absolute C1 code word quad and said target absolute C1 code word quad number is found, then generating an interrupt signal to interrupt transport of said data storage medium past said read head; and

25 commencing a write operation from a position of said read absolute C1 code word quad number which matches said target absolute C1 code word quad number.

30 2. The method as claimed in claim 1, wherein said step of reading an absolute C1 code word quad number comprises:

reading at least one absolute C1 code word quad number.

09881763 061801
T.08190 0978860

545
A1

3. The method as claimed in claim 1, further comprises the steps of:

5 distinguishing between a first and second written C1 code word pair within a same C1 code word quad, by searching for a synchronization field selected from the set;

a forward synchronization field;

10 a back synchronization field;

a re-synchronization data field.

15 4. A method of locating an append point along a length of linear data storage medium, said append point indicating a position from which to write data along said linear data storage medium, said method comprising the steps of:

20 reading a plurality of absolute C1 code word quad numbers from at least one track of said data storage medium;

comparing said read absolute C1 code word quad number with a pre-stored target absolute C1 code word quad number;

25 finding a match between a read absolute C1 code word quad number and said stored target absolute C1 code word quad number;

generating an interrupt signal for interrupt of transport of said tape data storage medium.

30 5. The method as claimed in claim 4, further comprising the step of:

09001763-061801

distinguishing between a pair of absolute C1 code word quad numbers read from a pair of C1 code word pairs within a C1 code word quad; and

5 selecting said append point as a first said C1 code word pair within said C1 code word quad.

6. The method as claimed in claim 4, further comprising the step of:

10 distinguishing between a pair of absolute C1 code word quad numbers, read from respective first and second C1 code word pairs within a C1 code word quad by examining a data field selected from the set;

a forward synchronization data field;

15 a re-synchronization data field;

a back synchronization data field;

20 a data separation data field.

7. A computer program comprising program instructions for implementing a method of locating a position on a data storage medium from which to write data, said method comprising the steps of:

25 transporting said data storage medium past a read head;

reading a linear position data describing a linear position along said linear data storage medium and from said linear position data determining an approximate position of an append position from which to start writing data;

30

09881763.061801

having found said approximate position of said append point, reading an absolute C1 code word quad identifier number to identify individual C1 code word quads along the length of said data storage medium;

5 comparing said read absolute C1 code word quad numbers with a target absolute C1 code word quad number;

finding a correspondence between said read absolute C1 code word quad number and said target absolute C1 code word quad number;

10

if a match between said read absolute C1 code word quad and said target absolute C1 code word quad number is found, then generating an interrupt signal to interrupt transport of said data storage medium past said read head; and

15

commencing a write operation from a position of said read absolute C1 code word quad number which matches said target absolute C1 code word quad number.

8. A recording medium comprising program instruction data for
20 implementing a method of locating a position on a data storage medium from which to write data, said method comprising the steps of:

transporting said data storage medium past a read head;

25

reading a linear position data describing a linear position along said linear data storage medium and from said linear position data determining an approximate position of an append position from which to start writing data;

having found said approximate position of said append point, reading an
30 absolute C1 code word quad identifier number to identify individual C1 code word quads along the length of said data storage medium;

09881763-061801

comparing said read absolute C1 code word quad numbers with a target absolute C1 code word quad number;

finding a correspondence between said read absolute C1 code word quad number and said target absolute C1 code word quad number;

if a match between said read absolute C1 code word quad and said target absolute C1 code word quad number is found, then generating an interrupt signal to interrupt transport of said data storage medium past said read head; and

commencing a write operation from a position of said read absolute C1 code word quad number which matches said target absolute C1 code word quad number.

9. The recording medium as claimed in claims 8, comprising a read only memory device.

10. An electrical signal comprising digital program instruction data for implementing a method of locating a position on a data storage medium from which to write data, said method comprising the steps of:

transporting said data storage medium past a read head;

reading a linear position data describing a linear position along said linear data storage medium and from said linear position data determining an approximate position of an append position from which to start writing data;

having found said approximate position of said append point, reading an absolute C1 code word quad identifier number to identify individual C1 code word quads along the length of said data storage medium;

09881753.061804

comparing said read absolute C1 code word quad numbers with a target absolute C1 code word quad number;

5 finding a correspondence between said read absolute C1 code word quad number and said target absolute C1 code word quad number;

10 if a match between said read absolute C1 code word quad and said target absolute C1 code word quad number is found, then generating an interrupt signal to interrupt transport of said data storage medium past said read head; and

commencing a write operation from a position of said read absolute C1 code word quad number which matches said target absolute C1 code word quad number.

15 11. A tape data storage device comprising:

a read head and a write head;

20 a tape transport mechanism for transporting said linear tape data storage medium across said read head and said write head;

a search component operable to:

25 read a linear position data describing a linear position along said linear tape data storage medium and from said linear position data determine an approximate position of an append position from which to start writing data;

30 read an absolute C1 code word quad identifier number to identify individual C1 code word quads along a length of said linear tape data storage medium;

compare said read absolute C1 code word quad number with a target absolute C1 code word quad number;

00001753-051001

find a correspondence between said read absolute C1 code word quad number and said target absolute C1 code word quad number;

5 if a match between said read absolute C1 code word quad and said target absolute C1 code word quad number is found, then generate an interrupt signal to interrupt transport of said linear tape data storage medium past said read head; and

10 commence a write operation from a position of said read absolute C1 code word quad number which matches said target absolute C1 code word quad number.

12. A method of locating a position on a data storage medium from
15 which to write data, said method comprising the steps of:

transporting said linear data storage medium past a read head;

reading an absolute C1 code word quad identifier number to identify an
20 individual C1 code word quad along a length of said data storage medium;

comparing said read absolute C1 code word quad number with a target absolute C1 code word quad number;

25 determine a correspondence between said read absolute C1 code word quad number and said target absolute C1 quad number; and

on finding a correspondence, generating an interrupt signal to interrupt transport of said data storage medium past said read head.

ADD
A.